| Number   Hits   Search Text   | 0.0     |
|---|---------|
| and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (B6A)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and aded=20000616) and (dic\$5 or cut\$6 or saw\$5)   | U9:00   |
| Grid adj arrays) or (BGA)) and semiconductor and (dics/d or cuts/4 or saws/5)   and (adc/=20000616) and (dics/5)   Cuts/6 or saws/5)   (((wafer and (metal adj (film or layer))   SPAT;   Composition of the composition of   | ,       |
| Semiconductor and (dic\$4 or cut\$4 or separat\$5) and ead=20000616) and (dic\$5 or cut\$6 or saw\$5)   172 (((wafer and (metal adj (film or layer)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5) and (eatch\$5 or bond\$4) and (film or layer)) and (attach\$5 or bond\$4) and (film or layer)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or cut\$4 or cut\$4 or cut\$4 or cut\$4 or cut\$4 or separat\$5) and (attach\$5 or bond\$4) and (film or layer)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and (separat\$5) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and (separat\$5) and (attach\$5 or bond\$4) and (separat\$5) and (separat\$5) and (separat\$5) and (separat\$5)   |         |
| Separats(S)) and @ad<=20000616) and (dicS)  |         |
|   |         |
| 172   |         |
| and (attach\$5 or bond\$4) and (balls adj grid adj arrays) or (bGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and \$ads=20000616) and (dic\$5 or cut\$6 or saw\$5) and dic\$5 ((wasfer and (metal adj (film or layer)) and (attach\$5 or bond\$4) and (balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and \$ads=20000616) and (dic\$5 or cut\$6 or saw\$5) and (dicing or diced) (((wasfer and (metal adj (film or layer)) and (attach\$5 or bond\$4) and (balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5) and (adicath\$5 or bond\$4) and (balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5) and (adicath\$5 or bond\$4) and (balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and sed=20000616) and (dic\$5 or cut\$6 or saw\$5) and (dicing or diced)) and (individual\$3) or semiconductor and (dic\$4 or cut\$4 or separat\$5)) and sed=20000616) and (dic\$5 or cut\$6 or saw\$5) and (dicing or diced)) and (individual\$3) and (sed or cut\$4 or separat\$5)) and sed=20000616) and (dic\$5 or cut\$6 or saw\$5) and (dicing or diced)) and (individual\$3) and (sed or cut\$4 or separat\$5)) and semiconductor and (dic\$4 or cut\$4 or separat\$5) and semiconductor and (dic\$4 or cut\$4 or separat\$6) and (separat\$6) and (separa   | 09:24   |
| grid adj arrays) or (BGA)) and semiconductor and (dics4 or cuts4 or separats5)) and gad<-20000616) and (dic55 or cuts6 or saw55)) and dic55 or cuts6 or saw55) and dic55 or cuts6 or saw55) and dic55 or cuts6 or saw55) and (balls adj grid adj arrays) or (BGA)) and semiconductor and (dic44 or cuts4 or separats5)) and gad<-20000616) and (dicis5 or cuts6 or saw5)) and (dicing or diced) and (attach58 or bond54) and (balls adj grid adj arrays) or (BGA)) and semiconductor and (dic44 or cuts4 or separats5)) and gad<-20000616) and (dicis5 or cuts6 or saw5)) and (dicing or diced) and (individual3) are and) and (attach58 or bond54) and (balls adj grid adj arrays) or (BGA)) and semiconductor and (dic54 or cuts4 or separats5)) and gad<-20000616) and (dic55 or cuts6 or saw5)) and (dicing or diced)) and (individual3) or each) ((((wafer and (metal adj (film or layer)) and (attach58 or bond54) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic54 or cuts4 or separats5)) and gad<-20000616) and (dic55 or cuts6 or saw5)) and (dicing or diced)) and (individual3) and (dicing or diced)) and (individual3) and (dicis5 or cuts6 or saw5)) and (dicing or diced)) and (individual3) and (dicis5 or cuts6 or saw5)) and gad<-20000616) and (dic55 or cuts6 or saw5)) and gad<-20000616 and (dic55 or cuts6 or saw5)) and (dicing or diced)) and (individual3) adj device)  - 348 (438/15).CCLS 348 (438/15).CCLS 401 388/15,110,113,114.ccls. and test\$3 - 272 (438/115,110,113,114.ccls. and test\$3 - 272 (438/15,110,113,114.ccls. and test\$3) and (dic654 or cuts5) - 460 438/15,110,113,114.ccls. and test\$3) and (dic654 or cuts5) - 5 (("6077757") or ("6335224") or ("6309943") or ("630999") or ("630999") or ("63099943") or ("6309999") or ("630699")).PN 7 (("607757") or ("6335224") or ("6309943") or ("6309909") or ("630699")).PN (3000/02/05 dic55 or cuts5)   |         |
| Semiconductor and (dies4 or cuts4 or separats5) and dead<-20000616) and (dies5 or cuts6 or saw\$5) and dead<-2000616] and (dies5 or cuts6 or saw\$5) and dies5   USPAT;   USPA  |         |
| Separats 5) and dead = 20000616) and (diciss or cuts or saws 5) and dices 5 (((wafer and (metal adj (film or layer)) and (attachs or bonds 4) and ((balls adj grid adj arrays) or (BCA)) and (diciss or cuts or saws 5) and (diciss or cuts or saws 5) and (dicing or diced) ((((wafer and (metal adj (film or layer)) and (attachs 5 or bonds 4) and ((balls adj grid adj arrays) or (BCA)) and semiconductor and (dicis 4 or cuts 4 or separats 5)) and (adicing or diced) ((((wafer and (metal adj (film or layer)) and (attachs 5 or bonds 4) and ((balls adj grid adj arrays)) and (adicos or cuts 6 or saws 5)) and (dicis 9 or cuts 6 or saws 5)) and (dicis 9 or cuts 6 or saws 5)) and (dicis 9 or cuts 6 or saws 5)) and (dicis 9 or cuts 6 or saws 5)) and (dicis 9 or cuts 6 or saws 5)) and (dicis 9 or cuts 6 or saws 5)) and (dicis 9 or cuts 6 or saws 5)) and (dicis 9 or cuts 6 or saws 5)) and (dicis 9 or cuts 6 or saws 5)) and (dicis 9 or cuts 6 or saws 5)) and (dicis 9 or cuts 6 or saws 5)) and (dicis 9 or cuts 6 or saws 5)) and (dicing or diced)) and (individual 3) or cuts 6 or saws 5)) and (dicing or diced)) and (individual 3) and (balls adj grid adj arrays) or (BCA)) and semiconductor and (dics 4 or cuts 4 or separats 5)) and (attachs or bonds 4) and (balls adj grid adj arrays) or (BCA)) and semiconductor and (dics 4 or cuts 4 or separats 5)) and (adicing or diced)) and (individual 3) adj device)  38 (438/113).CCLS.  38 (438/113).CCLS.  40 (438/15).10,113,114.ccls. and test 53  40 (438/15).10,113,114.ccls. and test 53  40 (438/15,110,113,114.ccls. and test 53) and (dices 64 or cuts 5)  40 (438/15,110,113,114.ccls. and test 53) and (dices 64 or cuts 5)  50 (("6077757") or ("6335224") or ("6309943") or ("630990") or ("630990") or ("6309990") or ("63099943") or ("6309990") or ("630990") or ("63099943") or ("6309990") or ("63099943") or ("63099993") or ("6309999  |         |
| 6 92   or cut86 or saw\$5)   and dic\$5   USPAT; USPA  |         |
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| and (attach\$5 or bond\$4) and ((balls ad) grid ad) arrays) or (8GA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and (addicang or cut\$6 or saw\$5) and (dicing or diced) ((((wafer and (metal ad) [film or layer)) and (attach\$5 or bond\$4) and ((balls ad) grid ad) arrays) or (8GA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and (adicing or diced) ((((wafer and (metal ad) [film or layer)) and (attach\$5 or bond\$4) and (filcing or diced) and (individual\$3 or each) ((((wafer and (metal ad) (film or layer)) and (attach\$5 or bond\$4) and (balls ad) grid adj arrays) or (8GA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and (adctach\$5 or bond\$4) and (balls ad) grid adj arrays) or (8GA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and (adctach\$5 or bond\$4) and ((balls ad) grid adj arrays) or (8GA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and (adc*20000616) and (dic\$5 or cut\$6 or saw\$5) and (dicing or diced)) and (individual\$3) (((((wafer and (metal ad) (film or layer)) and (attach\$5 or bond\$4) and ((balls ad) grid adj arrays) or (8GA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and (adc*20000616) and (dic\$5 or cut\$6 or saw\$5) and (dicing or diced)) and (individual\$3 adj device)  - 348 (438/13). CCLS 349 (438/13). CCLS 340 (438/13). CCLS 341 (438/15). (10, 113, 114.ccls 342 (438/15, 110, 113, 114.ccls 343 (438/15, 110, 113, 114.ccls. and test\$3) and (dic\$4 or cut\$5) - 344 (438/15, 110, 113, 114.ccls. and test\$3) and (dic\$64 or cut\$5) - 345 (438/15, 110, 113, 114.ccls. and test\$3) and (dic\$65 or cut\$5) - 346 (438/15). 710, 113, 114.ccls. and test\$3) and (dic\$65 or cut\$5) - 346 (438/15, 110, 113, 114.ccls. and test\$3) and (dic\$65 or cut\$5) - 346 (dic\$5 or cut\$5) - 347 ("6077757") or ("6305224") or ("6309943") or ("6309909") or ("6326697").PN 348 (438/15, 110, 113, 114.ccls. and test\$3) and (dic\$5 or cut\$5) - 349 (dic\$5 or cut\$5) - 340 (dic\$5 or cut\$5) - 340 (dic\$65 or cut\$5) - 340 (dic\$65 or cut\$5) - 340 (dic\$65 or cut\$5)   | 09:35   |
| grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5) and @adc=20000616) and (dic\$5 or cut\$6 or saw\$5) and (dicing or diced) ((((wafer and (metal adj (film or layer)) and (attach\$5 or bond\$4) and (balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and @adc=20000616) and (dic\$5 or cut\$6 or saw\$5) and (dicing or diced) and (individual\$3 or each) ((((wafer and (metal adj (film or layer)) and (attach\$5 or bond\$4) and (balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and @adc=20000616) and (dic\$5 or cut\$6 or saw\$5) and (dicing or diced) and (individual\$3) ((((wafer and (metal adj (film or layer)) and (attach\$5 or bond\$4) and (balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and @adc=20000616) and (dic\$5 or cut\$6 or saw\$5) and (dicing or diced) and (individual\$3) ((((wafer and (metal adj (film or layer)) and (attach\$5 or bond\$4) and (balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and @adc=20000616) and (dic\$5 or cut\$6 or saw\$5) and (dicing or diced) and (individual\$3 adj device) (348/13).CCLS.  348 (438/15).CCLS.  440 (438/15).CCLS.  438/14).CCLS.  438/15,110,113,114.ccls.  440 (438/15).10,113,114.ccls.  440 (438/15).10,113,114.ccls. and test\$3 and (dic\$4 or cut\$5) (348/15,110,113,114.ccls. and test\$3) and (dic\$6 or cut\$6)  438/15,110,113,114.ccls. and test\$3 and (dic\$5 or cut\$5) (("6077757") or ("6335224") or ("6309994") or ("6309994") or ("6309994") or ("6309994") or ("6309994") or ("63099994") or ("6309994") or ("63099994") or ("6309999   |         |
| Semiconductor and (dic\$4 or cut\$4 or separats\$) and add=20000616) and (dic\$5 or cut\$6 or saw\$5)   and (dicing or diced)   |         |
| Separat\$5) and @ad<=20000616) and (dic\$5 or cut\$6 or saw\$5) and (dicing or diced) ((((wafer and (metal adj (film or layer)) and (attach\$5 or bond\$4) and ((balts adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and @ad<=20000616) and (dic\$5 or cut\$6 or saw\$5) and (dicing or diced)) and (individual\$3 or each) ((((wafer and (metal adj (film or layer))) and (attach\$5 or bond\$4) and ((balts adj grid adj arrays) or (BGA)) and (semiconductor and (dic\$4 or cut\$4 or separat\$5)) and @ad<=20000616) and (dic\$5 or cut\$6 or saw\$5) and (dicing or diced)) and (individual\$3) or cut\$6 or saw\$5) and (dicing or diced)) and (individual\$3) ((((wafer and (metal adj (film or layer))) and (attach\$5 or bond\$4) and ((balts adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or semiconductor and (dic\$6, and (dic\$5 or cut\$6 or saw\$5)) and (dicing or diced)) and (andividual\$3 adj device)  - 348 (438/15).CCLS 348 (438/15).CCLS 348 (438/113).CCLS 348 (438/113).CCLS 348 (438/113).CCLS 348 (438/15).10,113,114.ccls 460 (438/15,110,113,114.ccls. and test\$3) uspar 2002/07/03 2002/02/04 2002/03/05 2002/02/05 2002/02/05 2002/02/05 2002/02/05 2002/   |         |
| or cut\$6 or saw\$5) ) and (dicing or diced) ((((((((((((((((((((((((((((((((((((   |         |
| 70 ((((wafer and (metal adj (film or layer)) and (attach\$5 or bond\$4) and (balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cuts\$4 or separat\$5)) and &adc=20000616) and (dic\$5 or cut\$6 or saw\$5)) and (dicing or diced)) and (individual\$3 or each) ((((wafer and (metal adj (film or layer)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cuts\$4 or semiconductor and (dic\$5 or cut\$6 or saw\$5)) and (dicing or diced)) and (individual\$3) and (((wafer and metal adj (film or layer)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and (dicing or diced)) and (individual\$3) ((((wafer and (metal adj (film or layer))) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and &adc=20000616) and (dici\$5 or cut\$6 or saw\$5) and (dicing or diced)) and (individual\$3 adj device)  - 348 (438/15).CLS 258 (438/113).CCLS 258 (438/113).CCLS 94 (438/114).CCLS 95 (438/115).CLS 104 (438/15, 110, 113, 114.ccls 401 (348/15, 110, 113, 114.ccls. and test\$3) uspar 2002/07/03 20  |         |
| and (attach\$5 or bond\$4) and ((balls ad) grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and (dad<=20000616) and (dic\$5 or dic\$6 or saw\$5)) and (dicing or diced)) and (individual\$3 or each) ((((wafer and (metal adj (film or layer))) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$6 or saw\$5)) and (dic\$7 or diced)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$6 or saw\$5)) and (dic\$7 or diced)) and (individual\$3) ((((wafer and (metal adj (film or layer))) and (attach\$5 or bond\$4) and (dic\$1 adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and (dattach\$5 or bond\$4) and (dic\$1 adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and (ada<=20000616) and (dic\$5 or cut\$6 or saw\$5)) and (dicing or diced)) and (individual\$3 adj device)  348 (438/15).CCLS.  438 (438/113).CCLS.  438 (438/114).CCLS.  438 (438/114).CCLS.  401 438/15,110,113,114.ccls.  401 438/15,110,113,114.ccls. and test\$3  401 438/15,110,113,114.ccls. and test\$3  402 438/15,110,113,114.ccls. and test\$3  403 438/15,110,113,114.ccls. and test\$3  404 438/15,110,113,114.ccls. and test\$3  406 (dic\$5 or cut\$5)  5 ((*6077757") or (*6335224") or (*6309943") or (*6309909") or (*6326697")) PN.  6 (*63815") or (*6335224") or (*6309943") or (*6309909") or (*6326697") or (*63090909") or (*6326697") or (*6309090909") or (*6326697") or (*6309090909090909090909090909   | 00.36   |
| and (attach\$5 or bond\$4) and (balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and @ad<=20000616) and (dic\$5 or cut\$6 or saw\$5) ) and (dicing or diced)) and (individual\$3 or each) ((((wafer and (metal adj (film or layer)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and @ad<=20000616) and (dic\$5 or cut\$6 or saw\$5)) and (dicing or diced)) and (individual\$3) ((((wafer and (metal adj (film or layer)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and @ad<=20000616) and (dic\$5 or cut\$6 or saw\$5)) and (dicing or diced)) and (individual\$3) (USPAT; USPAT; USPAT; USPAT; 2002/077/03 (438/115).CCLS.  348 (438/113).CCLS.  349 (438/113).CCLS.  438/13,110,113,114.ccls.  401 (438/15,110,113,114.ccls. and test\$3) and (dic\$5 or cut\$6 or cut\$7 or cut\$6 or cut\$6 or cut\$7 or cut\$ | 09:36   |
| grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and &ad<=20000616) and (dic\$5 or cut\$6 or saw\$5)) and (dicing or diced)) and (individual\$3 or each)  ((((wafer and (metal adj (film or layer)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and (balls adj grid adj arrays) or (BGA)) and (balls adj grid adj arrays) or (BGA)) and (dic\$5 or cut\$6 or saw\$5)) and (dicing or diced)) and (individual\$3) and ((balls adj grid adj arrays) or (BGA)) and (balls adj grid adj arrays) or (ball) and (ball) and (balls adj grid adj arrays) or (ball) and (ball) and (ball) and (balls adj grid adj arrays) or (ball) and (b   |         |
| Semiconductor and (dic\$4 or cut\$4 or separat\$5) and add   8  |         |
| Separat\$5]) and @ad<=20000616) and (diciss or outs6 or saw\$5) and (dicing or diced)) and (individual\$3 or each)   USPAT; USPAT   USP   |         |
| or cuts6 or saws5) ) and (dicing or diced)) and (individuals3 or each) ((((wafer and (metal adj (film or layer)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and @add=20000616) and (dic\$5 or cut\$6 or saw\$5) ) and (dicing or diced)) and (individual\$3)  9  |         |
| diced) and (individual§3 or each)   USPAT;   USPAT  |         |
| 8   |         |
| 1   | 09:36   |
| grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and @ad<=20000616) and (dic\$5 or cut\$6 or saw\$5) ) and (dicing or diced)) and (individual\$3) ((((wafer and (metal adj (film or layer))) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and @ad<=20000616) and (dic\$5 or cut\$6 or saw\$5)) and (dicing or diced)) and (individual\$3 adj device)  - 348 (438/15).CLS 258 (438/113).CCLS 94 (438/113).CCLS 95 (438/114).CCLS 101 (438/15,110,113,114.ccls 101 (438/15,110,113,114.ccls 101 (438/15,110,113,114.ccls. and test\$3 - 272 (438/15,110,113,114.ccls. and test\$3) and (dice\$4 or cut\$5) - 101 (dice\$4 or cut\$5) - 101 (438/15,110,113,114.ccls. and test\$3) and (dice\$5 or cut\$5) - 101 (438/15,110,113,114.ccls. and test\$3 - 101 (dice\$6 or cut\$5) - 101 (438/15,110,113,114.ccls. and test\$3) and (dice\$5 or cut\$5) - 101 (438/15,110,113,114.ccls. and test\$3) and (dic\$5 or cut\$5) - 101 ("6077757") or ("6335224") or ("6309943") or ("6309909") or ("6326697")).PN 101 ("6077757") or ("6335224") or ("6309943") or ("6309909") or ("63026697")).PN 101 ("6077757") or ("63026697")).PN 101 ("607757") or ("6302697").PN 101 ("607757") or ("6302   |         |
| Semiconductor and (dic\$4 or cut\$4 or separat\$5)) and @ad<=20000616) and (dic\$5 or cut\$6 or saw\$5)) and (dicing or diced)) and (individual\$3) ((((wafer and (metal adj (film or layer)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and @ad<=20000616) and (dic\$5 or cut\$6 or saw\$5)) and (dicing or diced)) and (individual\$3 adj device)  |         |
| separat\$5)) and @ad<=20000616) and (dicips or cut%6 or saw\$5)) and (dicing or diced)) and (individual\$3)  ((((wafer and (metal adj (film or layer)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dics\$4 or cut\$4 or separat\$5)) and @ad<=20000616) and (dicips or cut\$6 or saw\$5)) and (dicing or diced)) and (individual\$3 adj device)  - 348 (438/15).CCLS 258 (438/113).CCLS 94 (438/110).CCLS 104 (438/114).CCLS 105 (438/114).CCLS 107 (438/114).CCLS 108 (438/15,110,113,114.ccls. and test\$3 - 109 (438/15,110,113,114.ccls. and test\$3) - 109 (438/15,110,113,114.ccls. and test\$3 - 109 (438/15,110,113,114.ccls. and test\$3) - 109 (438/15,1  |         |
| or cuts6 or saw\$5) ) and (dicing or diced) and (individual\$3)  ((((wafer and (metal adj (film or layer)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and @ad<=20000616) and (dic\$5 or cuts6 or saw\$5) ) and (dicing or diced)) and (individual\$3 adj device)  (438/15). CCLS.  (438/113). CCLS.  (438/113). CCLS.  (438/114). CCLS.  (438/115,110,113,114.ccls.  401 438/15,110,113,114.ccls.  401 438/15,110,113,114.ccls. and test\$3  (dice\$4 or cut\$5)  901 438/15,110,113,114.ccls. and test\$3 and (dice\$4 or cut\$5)  (438/15,110,113,114.ccls. and test\$3  (438/15,110,113,114.ccls. and test\$3  (438/15,110,113,114.ccls. and test\$3  (438/15,110,113,114.ccls. and test\$3  (502/02/04  (602) 202/02/04  (6039909") or ("6335224") or ("6309943") or ("6309909") or ("6326697")).PN.  (706309909") or ("6326697") or ("6309943") or ("6309909") or ("6326697") or ("6309943") or ("5958815") or ("5137836").PN.  (326 438/15,110,113,114.ccls. and test\$3) and (dic\$5 or cut\$5)  (438/15,110,113,114.ccls. and test\$3) and (dic\$5 or cut\$5)  |         |
| diced()) and (individual\$3)  |         |
| Section   Comparison   Compar  |         |
| Semiconductor and (dicay)   Osepation   Osepation   Osepatic   Osepation   Osepatic   | 09.37   |
| grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and @ad<=20000616) and (dic\$5 or cut\$6 or saw\$5)) and (dicing or diced)) and (individual\$3 adj device)  - 348 (438/15). CCLS 258 (438/113). CCLS (438/113). CCLS (438/114). CCLS (438/114). CCLS (438/114). CCLS (438/15). 10,113,114.ccls (438/15,110,113,114.ccls. and test\$3 - (438/15,110,113,114.ccls. and test\$3 - (438/15,110,113,114.ccls. and test\$3) and (dice\$4 or cut\$5) - (dice\$4 or cut\$5) - (438/15,110,113,114.ccls. and test\$3 - (438/15,110,113,114.ccls. and test\$3 - (438/15,110,113,114.ccls. and test\$3 - (438/15,110,113,114.ccls. and test\$3 - (60077757") or (6335224") or (6309943") or (6309909") or (6335697").PN ((60077757") or (6335224") or (6309943") or (6309909") or (6335697") or (6309909") or (6326697") or (6309909") or (6335224") or (63099093") or (63099093") or (63099093") or (63090993") or (6309093") or (63090  | 03.37   |
| Semiconductor and (dic\$4 or cut\$4 or separat\$5)) and @ad<=20000616) and (dic\$5 or cut\$6 or saw\$5)) and (dicing or diced)) and (individual\$3 adj device)  |         |
| separat\$5)) and @ad<=20000616) and (dic\$5 or cut\$6 or saw\$5)) and (dicing or diced)) and (individual\$3 adj device)  - 348 (438/15).CCLS. 258 (438/113).CCLS. 258 (438/113).CCLS. 259 (438/114).CCLS. 259 (438/114).CCLS. 2681 438/15,110,113,114.ccls. 272 (438/15,110,113,114.ccls. and test\$3 272 (438/15,110,113,114.ccls. and test\$3 272 (438/15,110,113,114.ccls. and test\$3) and (dice\$4 or cut\$5) 273 (438/15,110,113,114.ccls. and test\$3 274 (338/15,110,113,114.ccls. and test\$3 275 (438/15,110,113,114.ccls. and test\$3 286 (438/15,110,113,114.ccls. and test\$3) and (dic\$5 or cut\$5) 287 (2002/02/04  |         |
| or cut\$6 or saw\$5) ) and (dicing or diced) and (individual\$3 adj device)  (438/15).CCLS.  258 (438/113).CCLS.  (438/113).CCLS.  (438/114).CCLS.  (438/114).CCLS.  (438/115).10,113,114.ccls.  (438/15,110,113,114.ccls. and test\$3  (438/15,110,113,114.ccls. and test\$3) and (dice\$4 or cut\$5)  (438/15,110,113,114.ccls. and test\$3  (438/15,110,113,114.ccls. and test\$3) and (dic\$5 or cut\$5)  (("6077757") or ("6335224") or ("6309943") or ("6309999") or ("6326697")).PN.  ("5858815") or ("6335224") or ("6309943") or ("63099999") or ("6326697") or ("6309999") or ("6326697") or ("6309943") or ("6309909") or ("6326697") or ("6309943") or ("6309943") or ("6309943") or ("6309909") or ("6326697") or ("6309943") or ("6309943  |         |
| or cut\$6 or saw\$5) ) and (dicing or diced) and (individual\$3 adj device)  (438/15).CCLS.  258 (438/113).CCLS.  (438/15).CLS.  (438/15).10.CLS.  (438/15).10,113,114.ccls.  2002/07/03  2002/02/04  2001/08/07  2001/08/07  2001/08/07  2001/08/07  2001/08/07  2001/08/07  2001/08/07  2001/08/07  2002/02/04  2002/02/04  2002/02/04  2002/02/04  2002/02/04  2002/02/05  2002/02/05  2002/02/05  2002/02/05  2002/02/05  2002/02/05  2002/02/05  2002/02/05  2002/02/05  2002/02/05  2002/02/05  2002/02/05  2002/02/05  2002/02/05  2002/02/05  2002/02/05  2002/02/05  2002/02/05  |         |
| diced) and (individual\$3 adj device)   |         |
| - 348 (438/15).CCLS. 258 (438/13).CCLS. 94 (438/110).CCLS. 95 (438/114).CCLS. 10  | <b></b> |
| - 258 (438/113).CCLS. 94 (438/110).CCLS. 159 (438/114).CCLS. 159 (438/114).CCLS. 159 (438/15,110,113,114.ccls. 159 (438/15,110,113,114.ccls. and test\$3 USPAT 2002/07/03 2002/12/19 2002/12/19 2001/08/07 272 (438/15,110,113,114.ccls. and test\$3 and (dice\$4 or cut\$5) 438/15,110,113,114.ccls. 150 (438/15,110,113,114.ccls. 150 (438/15,110,113,114.ccls. and test\$3 USPAT 2001/08/07 2001/08/08/07 2001/08/07 2001/08/07 2001/08/07 2001/08/07 2001/08/07 2001   |         |
| - 94 (438/110).CCLS. 59 (438/114).CCLS. 681 438/15,110,113,114.ccls. 401 438/15,110,113,114.ccls. and test\$3 272 (438/15,110,113,114.ccls. and test\$3) and (dice\$4 or cut\$5) 438/15,110,113,114.ccls.  901 438/15,110,113,114.ccls.  901 438/15,110,113,114.ccls.  901 438/15,110,113,114.ccls.  901 438/15,110,113,114.ccls.  10SPAT 2002/07/03 2002/12/19 USPAT 2001/08/07 2001/08/07  2002/02/04 EPO; JPO; DERWENT USPAT; EPO; JPO; DERWENT USPAT 2003/05/21 or ("6309909") or ("6326697")).PN.  10  |         |
| - 59 (438/114).CCLS. 681 438/15,110,113,114.ccls. and test\$3 272 (438/15,110,113,114.ccls. and test\$3) and (dice\$4 or cut\$5)  901 438/15,110,113,114.ccls.  460 438/15,110,113,114.ccls. and test\$3  - 460 438/15,110,113,114.ccls. and test\$3  - 50 (438/15,110,113,114.ccls. and test\$3  - 60 (dice\$4 or cut\$5)  - 7 (("6077757") or ("6335224") or ("6309943") or ("6309909") or ("6326697")).PN.  - 7 (("6077757") or ("6335224") or ("6309943") or ("6309909") or ("6326697") or ("63090909") or ("6326697") or (   |         |
| - 681 438/15,110,113,114.ccls. and test\$3  | 08:58   |
| - 401 438/15,110,113,114.ccls. and test\$3  | 14:38   |
| 272   (438/15,110,113,114.ccls. and test\$3) and   USPAT   2001/08/07   | 15:09   |
| Comparison of the content of the c  | 15:10   |
| - 901 438/15,110,113,114.ccls. USPAT; EPO; JPO; DERWENT USPAT 2002/02/05 Or ("6309909") or ("6326697")).PN.  - 7 (("6077757") or ("6335224") or ("6309943") or ("6309909") or ("6335224") or ("6309943") or ("6309909") or ("6326697") or ("6309909") or ("6326697") or ("5858815") or ("5137836")).PN.  - 326 (438/15,110,113,114.ccls. and test\$3) and (dic\$5 or cut\$5)  |         |
| 460 438/15,110,113,114.ccls. and test\$3  460 438/15,110,113,114.ccls. and test\$3  (438/15,110,113,114.ccls. and test\$3) and (dic\$5 or cut\$5)  (dic\$5 or cut\$5)  (("6077757") or ("6335224") or ("6309943") or ("6309909") or ("6326697")).PN.  (("6077757") or ("6335224") or ("6309943") or ("6309909") or ("6326697") or ("6309909") or ("6326697") or ("6309909") or ("6326697") or ("5858815") or ("5137836")).PN.  326 (438/15,110,113,114.ccls. and test\$3) and (dic\$5 or cut\$5)  | 09:53   |
| DERWENT USPAT; EPO; JPO; DERWENT USPAT 2002/02/05  [ ("6077757") or ("6335224") or ("6309943") or ("6309909") or ("6335224") or ("6309943") or ("6309909") or ("6326697") or ("6309943") or ("6309909") or ("6326697") or ("5858815") or ("5137836")).PN.  [ 326 (438/15,110,113,114.ccls. and test\$3) and (dic\$5 or cut\$5)  |         |
| - 460 438/15,110,113,114.ccls. and test\$3 USPAT; EPO; JPO; DERWENT USPAT 2002/02/05  5 (("6077757") or ("6335224") or ("6309943") or ("6309909") or ("6335224") or ("6309943") or ("6309909") or ("6326697") or ("6309943") or ("6309909") or ("6326697") or ("6309943") or ("5858815") or ("5137836")).PN.  326 (438/15,110,113,114.ccls. and test\$3) and (dic\$5 or cut\$5)   |         |
| - 460 438/15,110,113,114.ccls. and test\$3 and USPAT; EPO; JPO; DERWENT USPAT; EPO; JPO; DERWENT USPAT; EPO; JPO; DERWENT USPAT 2003/05/21 or ("6309909") or ("6326697")).PN.  - 7 (("6077757") or ("6335224") or ("6309943") or ("6309909") or ("6335224") or ("6309943") or ("6309909") or ("6326697") or ("6309909") or ("6326697") or ("5858815") or ("5137836")).PN.  - 326 (438/15,110,113,114.ccls. and test\$3) and USPAT; EPO; JPO;  | 09:54   |
| DERWENT USPAT; EPO; JPO; DERWENT USPAT ("6077757") or ("6335224") or ("6309943") or ("6309909") or ("6326697")).PN.  ("6077757") or ("6335224") or ("6309943") or ("6077757") or ("6335224") or ("6309943") or ("6309909") or ("6326697") or ("5858815") or ("5137836")).PN.  326 (438/15,110,113,114.ccls. and test\$3) and (USPAT; EPO; JPO;  | 05.03   |
| - 325 (438/15,110,113,114.ccls. and test\$3) and (dic\$5 or cut\$5)  5 (("6077757") or ("6335224") or ("6309943") Or ("6309909") or ("6326697")).PN.  7 (("6077757") or ("6335224") or ("6309943") Or ("6309909") or ("6335224") or ("6309943") Or ("6309909") or ("6326697") or ("5858815") or ("5137836")).PN.  326 (438/15,110,113,114.ccls. and test\$3) and (dic\$5 or cut\$5)   |         |
| Company   | 00.26   |
| (dic\$5 or cut\$5)  (("6077757") or ("6335224") or ("6309943") or ("6309909") or ("6326697")).PN.  (("6077757") or ("6335224") or ("6309943") or ("6309909") or ("6326697") or ("6309909") or ("6326697") or ("5858815") or ("5137836")).PN.  326 (438/15,110,113,114.ccls. and test\$3) and (dic\$5 or cut\$5)   | 00:20   |
| - (("6077757") or ("6335224") or ("6309943") USPAT 2003/05/21 or ("6309909") or ("6326697")).PN.  7 (("6077757") or ("6335224") or ("6309943") or ("6309909") or ("6326697") or ("6309909") or ("6326697") or ("5858815") or ("5137836")).PN.  326 (438/15,110,113,114.ccls. and test\$3) and (USPAT; EPO; JPO;   |         |
| or ("6309909") or ("6326697")).PN.  (("6077757") or ("6335224") or ("6309943") or ("6309909") or ("6326697") or ("5858815") or ("5137836")).PN.  (438/15,110,113,114.ccls. and test\$3) and USPAT; (dic\$5 or cut\$5)   |         |
| or ("6309909") or ("6326697")).PN.  (("6077757") or ("6335224") or ("6309943") or ("6309909") or ("6326697") or ("5858815") or ("5137836")).PN.  326 (438/15,110,113,114.ccls. and test\$3) and (dic\$5 or cut\$5)  USPAT; EPO; JPO;  | 08:46   |
| - 7 (("6077757") or ("6335224") or ("6309943") USPAT 2002/02/05 or ("6309909") or ("6326697") or ("5858815") or ("5137836")).PN.  326 (438/15,110,113,114.ccls. and test\$3) and USPAT; EPO; JPO;   |         |
| or ("6309909") or ("6326697") or ("5858815") or ("5137836")).PN.  326 (438/15,110,113,114.ccls. and test\$3) and (dic\$5 or cut\$5)  USPAT; EPO; JPO;   | 09:49   |
| ("5858815") or ("5137836")).PN.  (438/15,110,113,114.ccls. and test\$3) and USPAT; EPO; JPO;  |         |
| 326 (438/15,110,113,114.ccls. and test\$3) and USPAT; 2002/02/05 (dic\$5 or cut\$5)   |         |
| (dic\$5 or cut\$5) EPO; JPO;  | 08:28   |
| 1 (UICO) OI CUCOO   |         |
| DERWENT   |         |
|   | 08:33   |
| 1 (1438/13,110,113,114,0013, and 000040, and 144  |         |
| (dicy) of cacys, , and (magnes), and  |         |
|   | 08-32   |
| 1 1/0 1 ((438/15,110,113,113,0015, and 005045) and  | . 00.32 |
| (dic\$5 or cut\$5) ) and (align\$5) EPO; JPO;   |         |
| DERWENT   |         |

| _ | A |
|---|---|
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|              |       |  |           | 1 100 /05 00 5 5   |
|--------------|-------|--|-----------|--------------------|
| _            | 2705  | magnet\$7 adj align\$5                     | USPAT;    | 2002/02/05 08:56   |
|              |       |  | EPO; JPO; |                    |
|              |       |  | DERWENT   |                    |
| _            | 0     | (magnet\$7 adj align\$5) and (wafer adj20  | USPAT;    | 2002/02/05 08:37   |
|              | •     | dielectric adj tape)                       | EPO; JPO; |                    |
|              |       | , , , , , , , , , , , , , , , , , , ,      | DERWENT   |                    |
| _            | 0     | wafer adj20 dielectric adj tape            | USPAT;    | 2002/02/05 08:37   |
|              |       |  | EPO; JPO; | 1                  |
|              |       |  | DERWENT   |                    |
|              | _     | wafer adj dielectric adj tape              | USPAT;    | 2002/02/05 08:38   |
| -            | · ·   | water adj dicicettic daj capo              | EPO; JPO; |                    |
|              | 1     |  | DERWENT   |                    |
|              | 248   | (magnet\$7 adj align\$5) and semiconductor | USPAT;    | 2002/02/05 08:57   |
| -            | 248   | (magnets) adj alignas) and semiconductor   | EPO; JPO; | 2002, 02, 00       |
|              |       |  | DERWENT   |                    |
|              |       | //   | USPAT;    | 2002/02/05 08:49   |
| <del>-</del> | 0     | ((magnet\$7 adj align\$5) and ring) and    | EPO; JPO; | 2002,02,03         |
|              | İ     | (charged adj slot)                         | DERWENT   |                    |
|              |       |  | l .       | 2002/02/05 08:49   |
| -            | 0     | (magnet\$7 adj align\$5) and (charged adj  | USPAT;    | 2002/02/03 08.49   |
|              |       | slot)                                      | EPO; JPO; |                    |
|              |       |  | DERWENT   | 2000/00/05 00 50   |
| -            | 613   | (magnet\$7 adj align\$5) and ring          | USPAT;    | 2002/02/05 08:50   |
|              |       |  | EPO; JPO; | 1                  |
|              |       |  | DERWENT   | 0000/00/05         |
| -            | 47    | ((magnet\$7 adj align\$5) and ring) and    | USPAT;    | 2002/02/05 08:51   |
|              |       | semiconductor                              | EPO; JPO; |                    |
|              |       |  | DERWENT   |                    |
|              | 3066  | optically adj align\$5                     | USPAT;    | 2002/02/05 08:56   |
|              |       |  | EPO; JPO; |                    |
|              |       |  | DERWENT   |                    |
| _            | 612   | (optically adj align\$5) and semiconductor | USPAT;    | 2002/02/05 08:57   |
|              | 012   | (operouss) and assign, and assignment      | EPO; JPO; |                    |
|              |       |  | DERWENT   | 1                  |
|              | 8     | (("6077757") or ("6335224") or ("6309943") | USPAT     | 2003/05/20 08:12   |
| -            | "     | or ("6309909") or ("6326697") or           |           |                    |
|              |       | ("5858815") or ("5137836") or              |           |                    |
|              |       | ("4781969")).PN.                           |           |                    |
|              | 10000 |  | USPAT;    | 2002/07/03 08:13   |
| -            | 10260 | wood.inv.                                  | US-PGPUB; | 2002, 51, 50 50115 |
|              |       |  | EPO; JPO; |                    |
|              |       |  | DERWENT;  |                    |
|              |       |  | IBM TDB   |                    |
|              | 500   | 1    | USPAT;    | 2002/07/03 08:13   |
| -            | 539   | wood.inv. and alan                         | US-PGPUB; | 2002/07/03 00:13   |
|              |       |  |           |                    |
|              | 1     |  | EPO; JPO; |                    |
|              |       |  | DERWENT;  |                    |
|              |       |  | IBM_TDB   | 2002/07/02 00-14   |
| -            | 232   | 1 '  | USPAT;    | 2002/07/03 08:14   |
|              |       | technology)                                | US-PGPUB; | }                  |
|              |       |  | EPO; JPO; |                    |
|              |       |  | DERWENT;  |                    |
|              |       |  | IBM_TDB   |                    |
| -            | 1     | ("6268650").PN.                            | USPAT     | 2002/12/20 10:24   |
| -            | 425   | (438/15).CCLS.                             | USPAT     | 2002/07/08 08:43   |
| -            | 331   | (438/113).CCLS.                            | USPAT     | 2002/07/08 08:57   |
| _            | 140   | (438/110).CCLS.                            | USPAT     | 2002/07/08 08:57   |
| i -          | 90    | (438/114).CCLS.                            | USPAT     | 2002/07/08 08:57   |
| -            | 425   |  | USPAT     | 2002/07/08 08:43   |
| -            | 331   |  | USPAT     | 2002/07/08 08:57   |
| -            | 140   |  | USPAT     | 2002/07/08 08:57   |
| _            | 90    | (438/114).CCLS.                            | USPAT     | 2002/07/08 14:32   |
| l -          | 13    |  | USPAT     | 2002/07/08 10:35   |
|              |       | or ("6326700") or ("6268650") or           |           | 1                  |
|              |       | ("5858815") or ("5817535") or ("5770032")  |           | 1                  |
|              |       | or ("4781969") or ("5073840") or           |           |                    |
| ł            |       | ("5696033") or ("5834839") or              |           |                    |
|              |       | ("6160714")).PN.                           |           |                    |
| _            | 8     | (("6309909") or ("5858815") or ("5137836") | USPAT     | 2002/07/09 09:56   |
|              | 1     | or ("6077757") or ("6326697") or           |           |                    |
| 1            |       | ("6165885") or ("5834320") or              |           |                    |
|              |       | ("4781969")).PN.                           |           |                    |
|              | J     | 1 ( 1,01,000 ) / / + 1111                  |           |                    |

| <u> </u> | 0    | (wafer adj (bond\$3 or attach\$3) near4   | USPAT;                    | 2002/12/19 15:00 |
|----------|------|---|---------------------------|------------------|
| :        |      | (dielectric adj (layer or film))) same  | US-PGPUB;                 |                  |
|          |      | test\$3 same (cut\$4 or dic\$3 or separat\$3)   | EPO; JPO;                 |                  |
|          | ļ    |   | DERWENT;                  |                  |
|          |      | (m. Fan and /hande2 an attache2) noar4  | IBM_TDB<br>USPAT;         | 2002/12/19 14:07 |
| -        | 0    | <pre>(wafer adj (bond\$3 or attach\$3) near4 (dielectric adj (layer or film))) same</pre> | US-PGPUB;                 | 2002/12/13 14:07 |
|          |      | test\$3 same (cut\$4 or dic\$3 or separat\$3)   | EPO; JPO;                 |                  |
|          |      | testas same (cuto4 of dic4s of separation)  | DERWENT;                  |                  |
|          |      |   | IBM TDB                   |                  |
| 1_       | 19   | wafer adj (bond\$3 or attach\$3) near4  | USPĀT;                    | 2002/12/19 14:07 |
|          |      | (dielectric adj (layer or film))  | US-PGPUB;                 |                  |
|          |      |   | EPO; JPO;                 |                  |
|          |      |   | DERWENT;                  |                  |
| ,        | _    |   | IBM_TDB                   | 2002/12/19 14:38 |
| -        | 0    |   | USPAT;<br>US-PGPUB;       | 2002/12/19 14.30 |
|          |      | (dielectric adj (layer or film))) same test\$3  | EPO; JPO;                 |                  |
|          |      | test\$3   | DERWENT;                  |                  |
|          | İ    |   | IBM TDB                   | ĺ                |
| l _      | 963  | 438/15,110,113,114.ccls.  | USPĀT                     | 2002/12/19 14:38 |
| _        | 1212 | 438/15,110,113,114.ccls.  | USPAT;                    | 2002/12/19 14:38 |
|          |      | ,   | US-PGPUB;                 |                  |
|          |      |   | EPO; JPO;                 |                  |
|          | i    |   | DERWENT;                  | ļ                |
|          |      |   | IBM_TDB                   | 2002/12/19 14:40 |
| -        | 0    |   | USPAT;                    | 2002/12/19 14:40 |
|          |      | (bond\$3 or attach\$3) near4 (dielectric adj  | US-PGPUB;                 |                  |
|          |      | (layer or film))) same test\$3)   | EPO; JPO;<br>DERWENT;     |                  |
|          | ļ    |   | IBM TDB                   |                  |
|          | a    | (wafer adj (dielectric adj (layer or  | USPAT;                    | 2002/12/20 08:18 |
| _        |      | film))) same test\$3  | US-PGPUB;                 |                  |
|          |      | TIIM/// Same cost40   | EPO; JPO;                 |                  |
|          |      |   | DERWENT;                  |                  |
|          |      |   | IBM_TDB                   |                  |
| -        | 13   |   | USPAT                     | 2002/12/19 15:19 |
|          |      | or ("5977629") or ("6326700") or  |                           |                  |
|          | }    | ("6268650") or ("5858815") or ("5817535")   |                           | <u> </u>         |
|          |      | or ("5770032") or ("5796170") or  |                           |                  |
|          | Ì    | ("4781969") or ("5073840") or ("5696033")).PN.  |                           |                  |
|          | 85   |   | USPAT;                    | 2002/12/20 08:42 |
| _        | 65   | (cut\$3 or dic\$3 or slic\$3)   | US-PGPUB;                 |                  |
|          |      | ,   | EPO; JPO;                 |                  |
|          |      |   | DERWENT;                  |                  |
|          |      |   | IBM_TDB                   |                  |
| -        | 78   |   | USPAT;                    | 2002/12/20 09:38 |
|          |      | (cut\$3 or dic\$3 or slic\$3)) and  | US-PGPUB;                 | }                |
|          |      | semiconductor   | EPO; JPO;<br>DERWENT;     |                  |
|          |      |   | IBM TDB                   |                  |
|          | 348  | (wafer same (dielectric adj (layer or   | USPAT;                    | 2002/12/20 09:35 |
| -        | 348  | film))) same test\$3  | US-PGPUB;                 |                  |
|          |      | 11111/// 50110 555545   | EPO; JPO;                 |                  |
|          |      |   | DERWENT;                  |                  |
|          |      |   | IBM_TDB                   |                  |
| _        | 322  | ((wafer same (dielectric adj (layer or  | USPĀT;                    | 2002/12/20 09:38 |
|          |      | film))) same test\$3 ) and semiconductor  | US-PGPUB;                 |                  |
|          |      |   | EPO; JPO;                 |                  |
|          |      |   | DERWENT;                  |                  |
|          |      | (4) -1 -4 -1 -4 -1 -4 -1 -4 -1  | <pre>IBM_TDB USPAT;</pre> | 2002/12/20 09:39 |
| -        | 98   | (((wafer same (dielectric adj (layer or film))) same test\$3 ) and semiconductor)         | US-PGPUB;                 | 2002/12/20 09:39 |
|          |      | and (cut\$3 or dic\$3)  | EPO; JPO;                 |                  |
|          |      | and (cut) of dicys)   | DERWENT;                  |                  |
|          |      |   | IBM TDB                   |                  |
| _        | 1    | ("6424023").PN.   | USPAT                     | 2002/12/20 10:24 |
| _        | 3    |   | USPAT                     | 2002/12/23 11:53 |
|          | 1    | ("6389689")).PN.  |                           |                  |
|          | 2    | (("5897337") or ("6389689")).PN.  | USPAT                     | 2002/12/23.11:53 |
| ·        |      |   |                           |                  |

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|            |        |   |           | 10000105100        |
|------------|--------|---|-----------|--------------------|
| [ <b>-</b> | 9187   | ((balls adj grid adj arrays) or (BGA)) and  | USPAT;    | 2003/05/20 07:59   |
|            |        | semiconductor                               | US-PGPUB; | İ                  |
|            |        |   | EPO; JPO; |                    |
| }          |        |   | DERWENT;  | j                  |
|            |        |   | IBM_TDB   |                    |
| _          | 4418   | (((balls adj grid adj arrays) or (BGA))     | USPAT;    | 2003/05/20 08:02   |
|            | 1110   | and semiconductor) and (dic\$4 or cut\$4 or | US-PGPUB; | İ                  |
|            |        | separat\$5)                                 | EPO; JPO; |                    |
|            |        | Separacys                                   | DERWENT;  |                    |
|            | ا      |   | IBM TDB   |                    |
|            | 1.47.6 | (((balls adj grid adj arrays) or (BGA))     | USPĀT;    | 2003/05/20 08:04   |
| -          | 4476   | and semiconductor) and (dic\$4 or cut\$4 or | US-PGPUB; |                    |
|            |        | and semiconductor) and (dica4 of cuto4 of   | EPO; JPO; |                    |
|            |        | separat\$5 or saw\$4)                       | DERWENT;  |                    |
|            |        |   |           |                    |
|            |        |   | IBM_TDB   | 2003/05/20 08:04   |
| -          | 955    | ((((balls adj grid adj arrays) or (BGA))    | USPAT;    | 2003/03/20 08:04   |
|            |        | and semiconductor) and (dic\$4 or cut\$4 or | US-PGPUB; |                    |
|            |        | separat\$5)) and (metal adj (film or        | EPO; JPO; | 1                  |
|            |        | layer))                                     | DERWENT;  |                    |
|            |        |   | IBM_TDB   |                    |
| _          | 970    | ((((balls adj grid adj arrays) or (BGA))    | USPAT;    | 2003/05/20 08:04   |
|            |        | and semiconductor) and (dic\$4 or cut\$4 or | US-PGPUB; | ļ                  |
|            |        | separat\$5 or saw\$4)) and (metal adj (film | EPO; JPO; |                    |
|            |        | or layer))                                  | DERWENT;  |                    |
|            |        | Of Tayer,                                   | IBM TDB   |                    |
|            | 1      | ("20010052642").PN.                         | US-PGPUB  | 2003/05/20 08:12   |
| _          |        |   | USPAT;    | 2003/05/20 08:52   |
| -          | 472    | (attach\$5 or bond\$4) and ((balls adj grid | US-PGPUB; | 2555, 55, 25       |
| Í          |        | (attach\$5 or bond\$4) and ((balls ad) grid | EPO; JPO; |                    |
|            |        | adj arrays) or (BGA)) and semiconductor     | DERWENT;  |                    |
|            | 1      | and (dic\$4 or cut\$4 or separat\$5)        | i '       |                    |
| 1          |        |   | IBM_TDB   | 2003/05/20 08:55   |
| -          | 233    | (wafer and (metal adj (film or layer)) and  | USPAT;    | 2003/05/20 08:55   |
|            |        | (attach\$5 or bond\$4) and ((balls adj grid | US-PGPUB; |                    |
|            |        | adj arrays) or (BGA)) and semiconductor     | EPO; JPO; |                    |
|            |        | and (dic\$4 or cut\$4 or separat\$5)) and   | DERWENT;  |                    |
|            |        | @ad<=20000616                               | IBM_TDB   |                    |
| _          | 212    | 1 · · · · · · · · · · · · · · · · · · ·     | USPĀT;    | 2003/05/21 08:23   |
|            | 212    | and (attach\$5 or bond\$4) and ((balls adj  | US-PGPUB; |                    |
|            |        | grid adj arrays) or (BGA)) and              | EPO; JPO; |                    |
|            |        | semiconductor and (dic\$4 or cut\$4 or      | DERWENT;  |                    |
|            |        | separat\$5)) and @ad<=20000616) and (dic\$5 | IBM TDB   |                    |
| 1          |        | or cut\$6 or saw\$5)                        |           |                    |
|            | 1 000  | 1   | USPAT;    | 2003/05/20 09:06   |
| -          | 206    | ((water and (metal ad) (lilm of layer))     | US-PGPUB; | -355, 55, 25       |
|            |        | and (attach\$5 or bond\$4) and ((balls adj  | EPO; JPO; |                    |
| 1          |        | grid adj arrays) or (BGA)) and              |           |                    |
|            |        | semiconductor and (dic\$4 or cut\$4 or      | DERWENT;  |                    |
|            |        | separat\$5)) and @ad<=20000616) and (dic\$5 | IBM_TDB   |                    |
|            |        | or cut\$6)                                  |           | 0000 /05 /00 10 05 |
| -          | 1      |   | USPAT;    | 2003/05/20 10:06   |
|            |        | adj (film or layer)) same (attach\$5 or     | US-PGPUB; |                    |
|            |        | bond\$4) same ((balls adj grid adj arrays)  | EPO; JPO; |                    |
| 1          |        | or (BGA)) same (dic\$4 or cut\$4 or         | DERWENT;  |                    |
|            | 1      | separat\$5)) same (dic\$5 or cut\$6 or      | IBM_TDB   |                    |
|            |        | saw\$5)) and @ad<=20000616                  | _         |                    |
|            |        | saw\$5)) and @ad<=20000616                  |           |                    |